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Mainframe in the rearview: Driving the unframed future of state technology infrastructure

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EXECUTIVE SUMMARY

Over the past decade, the State of Michigan (SOM) executed a transformative, enterprise-wide modernization of its technology infrastructure, culminating in the retirement of its final five Unisys mainframes in May 2026. This coordinated effort, led by the Michigan Department of Technology, Management & Budget (DTMB) and involving multiple agencies—including the Michigan Department of Treasury, Michigan Department of Licensing and Regulatory Affairs (LARA), Michigan Department of Corrections (MDOC), Michigan Department of Health and Human Services (MDHHS), Michigan Department of State (MDOS), and Michigan Department of Labor and Economic Opportunity (LEO)—successfully migrated mission-critical systems to secure, scalable, cloud-based platforms. Notable achievements include Treasury’s Michigan Modernized Integrated Tax System (MiMITS), Treasury’s eServices initiatives (MiTreas), and LARA’s Sales Inventory Purchasing System (SIPS) solution, which replaced outdated finance and regulatory mainframes. This transition eliminated operational and financial risks tied to legacy systems and fundamentally enhanced the digital experience for users statewide. By adopting human-centered design, improving accessibility, and delivering unified enterprise solutions, Michigan has established a model for excellence in government technology.



IDEA

What problems or opportunities does the project address?

Michigan successfully migrated mission-critical systems to secure, scalable, cloud-based platforms. Two are chosen as exemplars to display the value of this modernization for the residents of the State of Michigan.

- **SIPS solution:** As a control state with more than \$2 billion in annual liquor sales, the Michigan Liquor Control Commission (MLCC) under LARA oversees the distribution, wholesaling, and financial administration of alcohol products. MLCC’s legacy Liquor Mainframe Finance system was responsible for key regulatory and financial functions including maintaining the liquor code master, managing price books, tracking inventory, processing retail orders, generating purchase orders, and reconciling invoices and payments. A barrier to legacy systems was that Authorized Distribution Agents (ADA) maintained their own source records for liquor orders, leaving MLCC without centralized visibility into statewide inventory. ADA deliveries may not match retailer orders, and the state lacked delivery confirmation, introducing delays and inaccurate inventory positions. Michigan operated separate product registration systems for spirits and non-spirits, creating complexity and an inconsistent user experience.
- **MiTreas, MiMITS solutions:** The Michigan Department of Treasury is responsible for collecting taxes, unpaid accounts, and other state-owed obligations. State courts are authorized to garnish property, and Treasury is required to intercept state tax refunds or credits for garnishments. Individual income tax processing and debt collection were performed on legacy systems, including those on the mainframe. The legacy applications required data synchronization across these systems, and e-Services self-service was extremely limited.

Modernization sought to reduce operating costs associated with legacy systems, address technical system limitations, improve staffing and resource allocation through modernization and improve end user experiences.



Why does it matter?

The consequences of inaction had become both operational and public.

- **SIPS solution:** Independent reporting specifically highlighted MLCC's oversight challenges, including failures to track up to 20% of statewide liquor inventory and hundreds of millions in ADA orders. Without centralized, timely order and delivery data, the state was challenged by audit requirements around maintaining accurate financial and inventory records.
- **MiTreas, MiMITS solutions:** The support staff with knowledge of the technology were leaving the workforce as the technology became unmanageable. The inability to provide self-service functionality for taxpayers and debtors and limitations in collection of debts was proving to limit the modern applicability of the legacy software on aging infrastructure.

Financially, these legacy systems created avoidable risk and cost:

- Continued Mainframe operation would have increased hosting costs significantly.
- Workforce shortages created backlogs and jeopardized compliance with state and federal law.
- Manual processes slowed operations and consumed staff and resident time.
- Dual registration systems confused licensees and complicated statewide service delivery.

The business case for modernization was clear: improving transparency, ensuring regulatory compliance, reducing operational risk, and sustaining a multibillion-dollar state revenue stream.

Innovation and collaboration at work

This transformation moved all State of Michigan agencies away from fragmented, manual, processes to a unified and service-oriented set of systems that improve both staff efficiency and resident user experience.

- **MiMITS** unified architecture consolidated processes that once spanned multiple disparate applications and represented a departure from a data center architecture to a modern platform with:
 - Complete, centralized taxpayer history for individual income tax.
 - Unified, consistent correspondence.
 - Streamlined and intuitive system navigation.
 - Comprehensive screen for case management.
 - Enhanced automation, usability, and functional depth for State employees.
 - Enhanced self-service usability for taxpayers.
- The **MiTreas** project continued this shift toward unified enterprise capability by consolidating three major systems previously used for the collection and administration of debts, garnishments, and levies, into a single cloud-based SAP S/4 platform providing:
 - A significantly improved and more accessible customer experience.
 - Enhanced automation, usability, and functional depth for state employees.
 - Reduced operational risk while maintaining opportunity for continued digital evolution.

- **SIPS** introduces capabilities that are dramatically different, and in many cases entirely new compared to the previous environment:
 - Complete, centralized visibility across ordering, distribution, inventory, and delivery.
 - Automated pricing and financial controls.
 - End-to-end process automation.
 - Unified product registration to ensure accuracy and consistent customer experience.
 - Greater transparency and oversight.
 - Automated processing for purchasing, invoicing, and reconciliation.
 - Enhanced accuracy, security, scalability, and long-term sustainability.

This initiative stands out for its transformative approach, not merely replacing outdated systems but fundamentally reimagining how Michigan delivers government services. By integrating multiple departments into a unified, modern digital platform, it enabled real-time transparency, automation, and operational reliability at an unprecedented scale. The project's innovative design established new standards for security, efficiency, and accessibility, setting a benchmark for digital government and demonstrating how technology can be leveraged to drive meaningful, statewide change.

The resulting transparency and real-time oversight are not just improvements, they represent a paradigm shift for control-state operations, showcasing how innovation can redefine public sector excellence.

What makes it universal?

These projects align directly with nationwide State CIO Top Ten Priorities, making it broadly applicable across government for states managing:

- Legacy system modernization.
- Strengthened financial oversight and audit accountability.
- Regulated supply chain processes.
- Cloud-forward enterprise architecture.
- Automation of manual work.
- Improved service delivery to residents and industry partners.

IMPLEMENTATION

What was the roadmap and how does this project fit into an enterprise view?

Projects followed a structured roadmap grounded in Michigan's enterprise modernization strategy prioritizing retirement of the mainframe and migration to secure, scalable cloud-based platforms able to align with statewide technology standards.

By selecting modern platforms already used across state agencies, these projects reinforced DTMB's enterprise principles: interoperability, standardization, security, and shared data practices. The solution's Azure based integrations support cross-department connectivity and position for future enterprise initiatives.

Hybrid project management

A hybrid approach balanced Waterfall governance with Agile adaptability. Waterfall structure guided roadmap milestones, formal approvals, and required documentation, while Agile practices supported iterative design, sprint cycles, backlog refinement, prototyping, and early stakeholder validation.

Major changes were managed through change notices requiring executive review and careful impact analysis. Governance bodies, including Enterprise Portfolio Management Office (EPMO), DTMB Agency Services, department leadership, procurement, and change control boards ensured transparency, accountability, and continuous alignment to business and project priorities.

Success milestones

Success criteria were defined early and evaluated continuously across modernization projects. These included but were not limited to:

- Strategic governance milestone exit approvals.
- SIT and UAT acceptance with defined test cases and measurable outcomes.
- Integration reliability across MILO, AIMS, ADAs, and financial subsystems.
- Defect trend analysis and performance benchmarking.
- Readiness checks prior to deployment.
- A warranty period culminating in a 95% post-go-live success rate for production defects.

Success across all modernization projects depended on the complete replacement of mainframe systems, precise daily financial reconciliation, real-time visibility into orders and inventory, adherence to regulatory requirements, and the establishment of stable, maintainable operations.

Who was involved?

Projects were delivered by a statewide partnership:

- The DTMB Office of the Chief Technology Officer (OCTO) played a central role in guiding, coordinating, and technically enabling Michigan's enterprise mainframe modernization efforts. As departments transitioned off legacy Unisys platforms, OCTO provided the strategic oversight, architectural governance, and cross-department coordination needed to ensure each modernization project aligned with enterprise standards, security requirements, and long-term cloud transformation goals.
- Department partners provided business expertise across finance, licensing, product registration, and vendor workflows, organizational change management and constituent outreach.
- Partners external to the state provided both business and technology expertise where interfaces were implemented.
- DTMB Agency Services contributed architecture, development, quality assurance, integration, and security.
- Contracted vendors contributed expertise where vendor solutions were utilized.

Is this universal?

Stakeholder engagement was intentional and continuous. Lean process improvement sessions, discovery workshops, and process mapping created early alignment. Regular demos, sprint reviews, steering committee meetings, newsletters, and milestone communications kept stakeholders informed and involved.

Role-based training, hands-on UAT, and early visibility into the solution strengthened adoption and ensured business users felt ownership of the system at go-live. Agencies and DTMB staffed cross-functional teams covering architecture, development, analysis, testing, security, and operations while external partners contributed domain expertise and operational insights essential for accurate business modalities.

Technical architecture and why it matters

The modernization initiative utilized a hybrid cloud architecture, leveraging platforms such as Salesforce, Microsoft Dynamics 365, and SAP S/4. These technologies were unified through Azure services and MILogin. Although each technology was distinct, together they delivered an integrated platform that enabled interactive capabilities for users.

- Realtime regulatory and financial oversight
- Scalable, secure cloud hosting
- Simplified maintenance and future enhancement
- Reduced reliance on niche legacy skills
- Standardized data structures that support statewide interoperability

IMPACT

What did the project make better?

The modernization effort addressed long-standing challenges rooted in aging, disconnected systems that could no longer support the state's operational, financial, or regulatory needs. Legacy platforms carried significant technical debt, rising support costs, and increasing risks to data accuracy, service delivery, and oversight.

While different modernized solutions were implemented to replace the mainframe, the project delivered several core improvements across departments:

- Integrated and consistent data – Modern architecture replaced siloed systems with shared data models that support end-to-end visibility across registration, financial, operational, and compliance processes.
- Standardized and streamlined business processes – Outdated, custom workflows were simplified and aligned to configurable, low customization COTS, ERP, CRM reducing complexity and enabling more efficient operations.
- Improved service delivery – Consolidated systems allow customers, industry partners, and internal staff to interact through clearer, more intuitive processes with fewer points of confusion or manual intervention.
- Modern technology foundation – Cloud-based platforms, ERP, CRM, and COTS capabilities positioned the State to retire mainframe dependencies, reduce long-term maintenance burdens, and support future enhancements without major redevelopment.
- Enhanced collaboration and communication – Modernized solutions fostered greater cross-departmental coordination, allowing stakeholders to share information easily and respond more quickly to regulatory, operational, and financial needs.
- Greater financial and operational transparency – Real-time reporting and automated reconciliation improved decision-making, compliance monitoring, and the State's ability to accurately manage high-value financial and inventory activity.
- Resilience and adaptability – By moving away from aging technology and bespoke systems, programs gained the flexibility needed to respond to statutory changes, audit findings, and evolving business needs.

Overall, the project strengthened the state's operational backbone by replacing fragmented, legacy technologies with a sustainable, integrated environment capable of supporting consistent service, improved oversight, and long-term modernization goals.

How do you know?

Hard savings and cost reductions

The impact of SIPS is clearest in the measurable results. The modernization delivered \$31.34 million in planned benefits and a 119% return on investment, validating the decision to retire the legacy mainframe and consolidated MLCC's fragmented technology stack.

The MiTreas modernization resulted in a 14% increase in revenue for the first full year of use from collections activities. Realized benefits for modernizing MiMITS are still being determined and are expected to be available following completion of a full tax year.

Soft savings and operational performance gains

By automating processes and enabling real-time access to accurate data, SOM delivered substantial operational improvements—including greater consistency, enhanced regulatory compliance, and reduced manual workload—empowering staff to focus on higher-value tasks and supporting more reliable oversight and decision-making across the State's operations.

Qualitative impact and testimonies

Users across MLCC, DTMB, and the broader industry have described the benefits in their own terms:

- Business staff report that the system “no longer fights them” and that they finally have clear audit trails and accurate information.
- Licensees experience faster access to data, fewer errors, and more intuitive self-service capabilities.
- DTMB teams note improved stability, fewer defects, cleaner integrations, and a more predictable operational environment.
- Executive leadership cite enhanced transparency, accountability, and the ability to address audit findings with confidence.

What now?

The longer-term plan for these systems is to maintain a stable, secure, and continuously improving platform that supports the strategic plans for those utilizing them. Because these solutions are built on enterprise technologies, all parties benefit from regular upgrades, strong cybersecurity alignment, scalability, and a flexible architecture that supports incremental enhancements across enterprise solutions.

Key elements of the long-term strategy include:

- Incremental enhancements and process optimization.
- Advanced automation and integration strengthening.
- Sustained platform support.
- Dedicated operational support model.
- Workforce sustainability.
- Cybersecurity resilience and compliance.

Departure from Mainframe systems was not just a modernization project; it is a critical, long-term investment in Michigan’s regulatory infrastructure and a model for other states replacing high-risk legacy systems. Continued support is warranted because it removes significant technical and operational risks, automates core financial and regulatory functions, strengthens audit readiness for high dollar markets, and delivers scalable, cloud-based technology that can evolve with future needs. It also improves service for licenses and the public while ensuring the state can sustainably support and staff the system over time.



These successful endeavors have positioned Michigan to regulate with transparency, accountability, and resilience. Protecting public trust, strengthening financial integrity, and ensuring that the systems supporting the State of Michigan are secure, modern, and sustainable.